Original Research

An Empirical Exploration Into the Measurement of Rape Culture

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Abstract

Feminist scholars have long argued the presence of a "rape culture" within the United States; however, limited efforts have been made to quantify this construct. A model of rape culture was first proposed in 1980 and expanded in the 1990s in an effort to quantify rape myth acceptance. This model posits that five underlying components make up a rape culture: traditional gender roles, sexism, adversarial sexual beliefs, hostility toward women, and acceptance of violence. Although these components are proposed as cultural phenomenon and thus distinct from individually held beliefs, they have been exclusively explored on an individual level. Thus, to promote exploration of this phenomenon beyond individually held beliefs, the authors adapted a series of well-established measures to assess the perceived peer support of the constructs proposed to underlie rape culture and assess initial reliability and validity in a sample of 314 college students. Following determination of reliability and validity of these adapted measures, a hierarchical confirmatory factor analysis was run to examine the proposed model of rape culture. Results of this study highlight the uniqueness between individual and cultural factors as several items did not translate from an individual (i.e., personal endorsement) to a cultural level (i.e., perceived peer support) and were subsequently removed from the proposed final measurements. Furthermore,

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initial support for the aforementioned model of rape culture was identified. These findings are crucial given that limited conclusions may be drawn about the existence and in turn eradication of rape culture without an agreed upon definition and source of measurement.

Sexual assault within the United States has often been referred to as a "silent epidemic" due to the high prevalence and low rate of reporting (Flintort, 2010). This silent epidemic is hypothesized to be a result of a culture that excuses and condones violence against women particularly rape and sexual assault. Due to this, the United States as a whole has often been referred to as having a "rape culture." Rape culture is a theoretical construct encompassing a number of rape-supportive attitudes, including traditional gender roles, hostility toward women, and acceptance of violence (Burt, 1980; Lonsway & Fitzgerald, 1994, 1995). Given the projected role of culture in high rates of rape and sexual assault, recent rape prevention efforts have embraced a social justice lens and thus propose to target and alter this rape-supportive culture (Henry & Powell, 2014). One particular area of interest and thus the target of various prevention efforts is the college campus due to its high prevalence of sexual assault and rape and low rate of reporting (Fisher, Cullen, & Turner, 2000; Planty, Langton, Krebs, Berzofsky, & Smiley-McDonald, 2013).

A Cultural Theory of Rape

The cultural theory of rape or rape culture originated in the 1970s during the rise of second-wave feminism. Although this construct has been cited frequently (Burnett, Mattern, Herakova, Kahl, Tobola, & Bornsen, 2009; Strain, Martens, & Saucier, 2016; Swauger, Witham, & Shinberg, 2013), limited effort has been made to verify this construct empirically.

Theorists broadly define rape culture as "a pervasive ideology that effectively supports or excuses sexual assault" (Burt, 1980, p. 218). Martha Burt (1980) presented the most comprehensive model of rape culture in an effort to quantify the construct rape myth acceptance. In this model, traditional gender roles, adversarial sexual beliefs, and acceptance of interpersonal violence were hypothesized to make up a rape culture. Burt (1980) posited that we as a country socialize our boys to be sexual aggressors and our girls to be sexually passive. Furthermore, we teach our children that aggressive behavior

during sex is natural and normal. As a result of this, rape may be viewed as an extreme form of sanctioned male–female sexual interactions. A recent study offers support for this normalization of sexual assault as one in three men endorsed behaviorally descriptive survey intentions (i.e., "coerce somebody into intercourse by holding them down") to commit sexual assault, but denied intentions when the word rape was used (i.e., "rape someone"; Edwards, Bradshaw, & Hinsz, 2014). This suggests that while we as a society may denounce the term rape, we have normalized the act.

In 1995, Lonsway and Fitzgerald expanded on Burt's model of rape culture to include sexism and hostility toward women. They also expanded the construct of acceptance of interpersonal violence to include a broader definition of violence. Sexism is related to rape and sexual assault as it maintains the imbalance of power between men and women and thus limits women's ability to have their voices heard both figuratively through victim blaming and literally through ignoring the word "no." Furthermore, negative societal views of women along with desensitization and acceptance of violence may excuse the perpetration of rape and sexual assault.

Research has demonstrated initial support for this theory given the association between the underlying components of rape culture (i.e., traditional gender roles, sexism, adversarial sexual beliefs, hostility toward women, and acceptance of violence) and male perpetration or proclivity for perpetration of violence against women including rape and sexual assault (Abrams, Viki, Masser, & Bohner, 2003; Edwards et al., 2014; Malamuth, Sockloskie, Koss, & Tanaka, 1991; Masser, Viki, & Power, 2006; Murnen, Wright, & Kaluzny, 2002; Rapaport & Burkhart, 1984; Santana, Raj, Decker, La Marche, & Silverman, 2006; Scott & Tetreault, 1987). The following section provides clear definitions and differentiations between the proposed components of rape culture and their posited roles in the continuation of rape and sexual assault.

Theoretical Components of Rape Culture

Traditional gender roles. Traditional gender roles may be defined as assumed roles, responsibilities, and interests of men and women based on cultural norms and expectations (Burt, 1980; Parent & Moradi, 2009, 2010). Examples of traditional gender roles include the following: men are dominant (e.g., winning masculine gender role) and women are submissive (e.g., modesty feminine gender role); men are aggressive (e.g., violence and emotional control masculine gender roles) and women are passive (e.g., sweet and nice feminine gender role); men are strong (e.g., self-reliance and risk-taking masculine gender roles) and women are fragile (e.g., thinness feminine gender

roles); men are sexual (e.g., power over women, heterosexual self-presentation, and playboy masculine gender roles) and women are pure (e.g., sexual fidelity and romantic relationship feminine gender roles).

In 1984, Dianne Herman stated, "American culture produces rapists when it encourages the socialization of men to subscribe to values of control and dominance, callousness and competitiveness, and anger and aggression, and when it discourages the expression by men of vulnerability, sharing, and cooperation" (p. 49). This suggests and has been supported by research that rapists are not deviant but rather individuals responding to cultural expectations of aggression and dominance (Bridges, 1991; Koss, Leonard, Beezley, & Oros, 1985; Scott & Tetreault, 1987). In fact, men who defy these cultural expectations may receive backlash and be deemed "deviant" or "abnormal" (Guy, 2006). Furthermore, women are often caught in a double bind during an incident of rape. Cultural norms expect women to be "pure" and therefore fight against male advancements. However, women are also taught to be submissive and passive and therefore speaking up against male advancements may also be looked down upon based on traditional gender roles. Therefore, following sexual assault, women are often blamed for "putting themselves in risky situations" or not "fighting back" when culture teaches women that it is not their place or right to fight back against men. This statement leads to the second component of rape culture, the devaluation of women or sexism (Herman, 1984).

Sexism. Sexism may be defined as stereotyping or discrimination against individuals based on their sex assigned at birth (Burt, 1980; Gaunt, 2013; Guy, 2006; Lonsway & Fitzgerald, 1994). Sexism exists on various levels within the United States including social and structural. Individuals are often discriminated against when they do not fit what is expected of them (e.g., by violating the assumption of traditional gender roles). For example, if a woman is aggressive she may experience discrimination, whereas if a man is passive he may experience similar discrimination. Our society encourages adherence to gender roles to avoid negative consequences and increase positive feedback (Guy, 2006). Furthermore, a core component of sexism is the belief that men are superior to women. This belief encourages the notion that women are merely objects for men's pleasure and therefore normalizes rape. Guy (2006) stated, "[. . .] sexual violence is the inevitable result of sexism" (p. 5). Although scholars have conceptualized sexism in many different ways, sexism is often broken into two related but unique constructs: hostile and benevolent sexism each of which has demonstrated association with the perpetration of or proclivity for rape and sexual assault (Abrams et al., 2003; Chapleau, Oswald, & Russell, 2007; Malamuth et al., 1991; Masser et al., 2006; Viki &

Abrams, 2002). Hostile sexism is defined as overtly negative views of women as compared with men and is hypothesized to relate to rape and sexual assault in several ways including the belief and support of the "superior" man over the woman following sexual assault and the view of women as deserving of victimization. Benevolent sexism is a chivalrous attitude toward women, which posits women as weak and in need of protection from men (Gaunt, 2013; Glick & Fiske, 1997). This is proposed to relate to rape and sexual assault given its association with acceptance of rape myths and increased blame of victims following sexual assault (Abrams et al., 2003; Chapleau et al., 2007; Viki & Abrams, 2002). An example of victim blame based on benevolent sexism is "She should have known better than to go out alone at night without a man for protection."

Adversarial sexual beliefs. The third proposed component underlying rape culture is the assumption that all "sexual relationships are fundamentally exploitative" (Burt, 1980, p. 218). Adversarial sexual beliefs include the notions that women are sly and manipulative and men are only after sex. It is proposed that cultures accepting such beliefs allow for the excusal or rationalization of rape, especially in incidences of date rape. This has been supported with research demonstrating that individuals endorsing adversarial sexual beliefs were more likely to excuse rape and sexual assault and prescribe blame to the victim (Emmers-Sommer, 2014; Emmers-Sommer et al., 2010; Muehlenhard, 1988). One rationale for rape based on adversarial sexual beliefs is the notion that women going into dates know that men expect sex; therefore, if a woman did not want to have sex, she should not have agreed to a date.

Hostility toward women. Linked to adversarial sexual beliefs is the idea that women are inherently ill-willed. Women are seen as deceitful, coercive beings, which leads some to assume that women will do anything to get ahead and are therefore not to be trusted. Holding these negative views toward women is hypothesized to justify and legitimize violence against them, including rape and sexual assault, and thus hostility toward women is proposed as the fourth component of rape culture (Lonsway & Fitzgerald, 1995). Research has supported this notion demonstrating that individuals holding more hostile views toward women were more likely to report coercive sexual behavior (Malamuth et al., 1991). Furthermore, research exploring differences between sexual offenders, nonsexual offenders, and nonoffending males found that sexual offenders endorsed significantly greater hostile views toward women compared with both nonsexual offenders and nonoffending males (Marshall & Moulden, 2001; Scott & Tetreault, 1987).

Acceptance of violence. Finally, the belief that violence is justified (e.g., violence in war, penal code of violence, corporal punishment of children) and in certain circumstances desired (e.g., rough sex) leads to a culture that accepts and encourages violence including rape and sexual assault (Burt, 1980; Herman, 1984; Lonsway & Fitzgerald, 1994). Therefore, the final proposed component underlying rape culture is acceptance of violence. Herman (1984) argued that the United States is a nation with an underlying theme of violence. The rates of violence in the United States further solidify this point. According to the Bureau of Justice Statistics (2016), 5,359,570 individuals were victims of violent crimes in 2014.

Due to the cultural value placed on men and the denigration of women described above, violence against women is particularly accepted in the United States (Guy, 2006; Martin, 2016). Burt (1980) argued that a strong association between sex and violence has been created in our culture. For example, the media often portrays rough sexual encounters as stimulating. Therefore, the notion that women want and enjoy rough sex is often used to justify sexual assault and violent behavior toward women. The statistics of violence against women support this assumption of acceptance with 256,313 women endorsing sexual assault and 634,612 women reporting violent victimization by an intimate partner in 2014 (Bureau of Justice Statistics, 2016). Furthermore, research has demonstrated that individuals endorsing greater acceptance of violence were more likely to report coercive sexual acts (Malamuth et al., 1991; Rapaport & Burkhart, 1984).

Research on Rape Culture

Although, as described above, an extensive model of rape culture has been proposed, no research to date has examined whether these attitudinal components create an underlying latent variable theorists have labeled rape culture (Critelli & Bivona, 2008). Researchers have examined rape culture using one or two of these attitudinal components or an assumed proxy of rape culture known as rape myth acceptance (Carroll, Rosenstein, Foubert, Clark, & Korenman, 2016; Strain et al., 2016). Without a consistent quantification of rape culture, limited conclusions can be drawn about the existence and in turn eradication of such a culture. Given the proposed role of rape culture in perpetuating and excusing rape, such research is sorely needed.

Furthermore, these constructs (i.e., traditional gender roles, sexism, adversarial sexual beliefs, hostility toward women, or acceptance of violence) have been exclusively explored on an individual-level (i.e., personal endorsement of beliefs) contrary to their proposed cultural structure. Betancourt's Integrative Model for the Study of Culture (Betancourt & Flynn, 2009)

defines cultural factors as, "Socially shared values, beliefs, and expectations" (p. 357). One approach to achieve a social understanding of beliefs is through the assessment of perceived peer endorsement of values, beliefs, and expectations. Consequently, Critelli and Bivona (2008) proposed the importance of examining peer attitudes to represent the cultural perception and in turn influence of these attitudes on rape.

Although individually held beliefs may shed light on cultural constructs, there are also several factors that may distinguish individually held beliefs from cultural constructs. First, social desirability, the tendency for individuals to respond in a manner that will be viewed as favorable, is a crucial component to consider when collecting self-report data. Research has consistently demonstrated that individuals are more willing to endorse potentially unfavorable views of others as opposed to themselves (e.g., Jones & Harris, 1967). Second, and potentially related to the first point, individually endorsed beliefs or attitudes do not always translate into behaviors. One such example is bystander behavior. A long history of research (e.g., Brown, Banyard, & Moynihan, 2014; Brown & Messman-Moore, 2010; Darley & Latane, 1968; Gidycz, Orchowski, & Berkowitz, 2011; Leone, Parrott, & Swartout, 2017) demonstrates individual endorsement of willingness to engage in bystander behavior; however, limited engagement in such behavior and small relations between belief and behavior has been recorded.

One explanation for the limited relation between individually held beliefs and behavior is cultural factors and expectations. Individuals may hold positive attitudes toward engaging in certain behaviors; however, if the social context is discouraging of such behavior, this may impede translation from attitude to action. Finally, research has demonstrated the superior predictive ability of cultural factors and context in comparison to personally held beliefs (Brown et al., 2014; Brown & Messman-Moore, 2010; Gidycz et al., 2011; Leone et al., 2017). Thus, an individual may be more likely to act in a way consistent with what they believe their peers support even if contrary to their personally held beliefs. Therefore, exploration into perceived peer support of rape culture is imperative as opposed to or at least in addition to personally held beliefs.

The Current Study

The current research aimed to extend the existent literature on rape culture in several ways: first, by adapting a series of well-established measures of individual-level or personal endorsement of the proposed components of rape culture—traditional gender roles (masculine and feminine), sexism (hostile and benevolent), adversarial sexual beliefs,
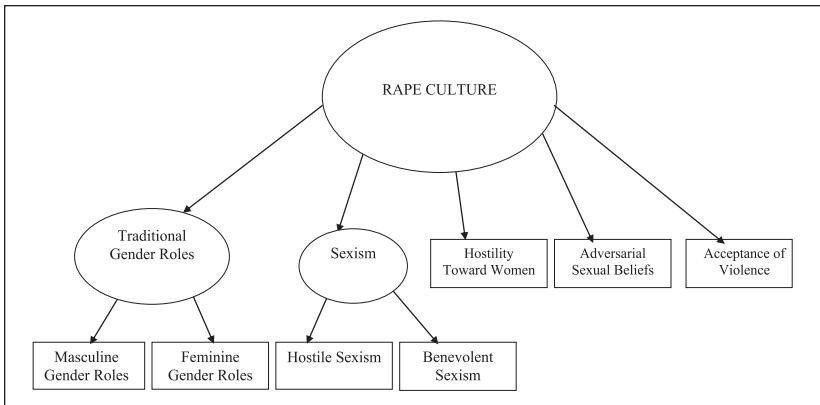
Figure 1. Proposed model of rape culture.

hostility toward women, and acceptance of violence to cultural-level or perceived peer support—and second, by investigating initial reliability and validity following adaption from individual to cultural-level given the potential difference between personal endorsement and perceived peer support of these constructs. Within the current research, peer support was defined as individuals belonging to the same social group, especially based on age, grade, or status. Such investigation is critical to address criticisms of previous explorations exclusively investigating rape culture on an individual-level and limited efforts to establish an agreed upon measurement of rape culture.

Next, the current study aimed to explore the proposed model (see Figure 1) of rape culture within a college sample due to the high prevalence of rape and sexual assault and low rate of reporting on college campuses. Within the current study, rape culture was defined as socially agreed upon attitudes and beliefs that women and men should adhere to specific roles (i.e., masculine and feminine traditional gender roles), that women are inherently less than men and thus needing of men's protection (i.e., hostile and benevolent sexism), that relations between men and women are always antagonistic (i.e., adversarial sexual beliefs), that women are not to be trusted (i.e., hostility toward women), and that violence is a necessary and in some circumstances desired component of society (i.e., acceptance of violence). An understanding of the components of rape culture as well as the relationship among those components is integral to the development of rape prevention efforts aimed at dismantling such a culture.

Method

Participants and procedures

Data were collected from 372 men and women currently enrolled in postsecondary education. Participants represented all geographic regions of the United States (i.e., Northeast, Midwest, South, and West). Ages ranged from 18 to 60 years with a mean age of 22.04 and a standard deviation of 5.28. Participants who did not at least begin all measures were removed from analyses, resulting in the removal of 58 participants leaving a final sample of 314 (see Results for further detail). Of the participants included in analyses, 232 (73.9%) were female with the remaining 82 (26.1%) identifying as male. Two-hundred sixty-one (83.1%) participants identified as exclusively heterosexual, 5 (1.6%) as exclusively homosexual, and 48 (15.3%) identified between these two extremes. The majority of participants, 70.1%, were White, with 13.4% Black/African, 4.8% Asian/Pacific Islander, 2.2% Hispanic/Latinx, 3.2% Middle Eastern, and 4.1% Multiracial. Regarding socioeconomic status (SES), the majority of participants, 269 (85.7%), identified as middle class, with 17 (5.4%) endorsing lower SES and 25 (8.0%) reporting upper SES.

Participants were recruited using snowball sampling from February to August of 2014. Snowball sampling was implemented by contacting various student list serves, university department heads across the United States, as well as posting access to the survey on Facebook and other social media outlets. A request to provide extra credit was made when contacting university department heads. Several agreed to provide extra credit for participation. All measures were completed anonymously online using Qualtrics software. To qualify for the study, participants had to be at least 18 years of age and currently enrolled in postsecondary education. Following completion of the survey, participants were sent to a separate website where they were provided the option to enter their name, email, and college/university to be entered into a drawing for one of four, $50 Visa gift cards and when applicable extra credit. Institutional review board (IRB) approval was obtained prior to initiating the study.

Measures

To address the aforementioned call for rape culture to be explored beyond the individual level (Critelli & Bivona, 2008), the language for all below described measures was altered to assess perceived peer support of rape-supportive beliefs or attitudes as opposed to personal endorsement. Instructions read as follows:

> Thinking about your peers' actions, feelings, and beliefs, please indicate how much you believe your peers would agree or disagree with each statement. When answering each question below please use the following definition of peers: individuals who belong to the same social group as you, especially based on age, grade, or status.

Traditional gender roles. The Conformity to Masculine Norm Inventory (CMNI; Parent & Moradi, 2009) and the Conformity to Feminine Norm Inventory (CFNI; Parent & Moradi, 2010) were used to assess perceived peer support of traditional gender roles. All participations responded to both the CMNI to determine perceived peer support of conformity to masculine norms and the CFNI to establish perceived peer support of conformity to feminine norms. The CMNI and CFNI are self-report measures rated on 4-point Likert scales (1 = *strongly disagree*, 4 = *strongly agree*). The CMNI consists of 46 items where the CFNI has 45 items. Factor structure has been established for both the CMNI and CFNI, with nine factors underlying the CMNI (i.e., winning, emotional control, risk-taking, violence, power over women, playboy, self-reliance, primacy of work, and heterosexual self-presentation) and nine factors underlying the CFNI (i.e., thinness, domestic, invest in appearance, modesty, relational, involvement with children, sexual fidelity, romantic relationship, and sweet and nice). In previous research, Cronbach's alphas for the CMNI ranged from .77 to .91 demonstrating good to excellent internal consistency (Parent & Moradi, 2009). Regarding the CFNI, Cronbach's alphas ranged from .68 to .89 indicative of fair to good internal consistency (Parent & Moradi, 2010).

Sexism. The Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1997) was used to assess participants' perceived peer support of sexist attitudes. The ASI is a 22-item self-report measure. Participants respond using a 6-point Likert scale ranging from 1 (*disagree strong*) to 6 (*agree strongly*). The ASI results in two primary factors: hostile sexism and benevolent sexism (i.e., protective paternalism, complementary gender differentiation, and heterosexual intimacy). The ASI has demonstrated excellent reliability and validity. The subscales all demonstrated good to excellent internal consistency (αs = .80 to .90) in previous research (Glick & Fiske, 1997).

Adversarial sexual beliefs. The Adversarial Heterosexual Beliefs Scale (AHBS; Lonsway & Fitzgerald, 1995) was used to examine perceived peer support of adversarial sexual beliefs. The AHBS is a 15-item self-report measure. Participants respond using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Factor structure has not been established for the

AHBS; however, researchers have utilized a summation in previous research suggestive of a single overall factor (Forbes, Adams-Curtis, & White, 2004; Loh, Gidycz, Lobo, & Luthra, 2005; Lonsway & Fitzgerald, 1995). Cronbach's alphas for this measure have ranged from .78 to .99 indicative of adequate internal consistency (Lonsway & Fitzgerald, 1995).

Hostility toward women. The Hostility Toward Women Scale (HTWS; Lonsway & Fitzgerald, 1995) assessed perceived peer support of hostility toward women within the current research. This scale was adapted from Check, Malamuth, Elias, and Barton's (1985) scale of hostility toward women. For the HTWS, participants respond on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly* agree) to 10 self-reported items. Factor structure has not been established for the HTWS; however, researchers have utilized a summation in previous research suggestive of a single overall factor (Forbes et al., 2004; Loh et al., 2005; Lonsway & Fitzgerald, 1995). In prior examination into reliability of the HTWS, Cronbach's alphas have ranged from .83 to .85 (Lonsway & Fitzgerald, 1995).

Acceptance of general violence. The Attitudes Toward Violence Scale (ATVS; Lonsway & Fitzgerald, 1995) was used to assess perceived peer support of acceptance of general violence. Items were chosen to represent the theoretical components described by Velicer, Huckel, & Hansen (1989). The ATVS is a 20-item self-report measure. Participants respond to each using a 5-point Likert scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). The aforementioned theoretical components resulted in a subsequent factor structure of four factors (i.e., violence in war, penal code violence, corporal punishment of children, intimate partner violence) underlying the overall latent factor. Examination into reliability and validity demonstrated good internal consistency (Cronbach's alpha = .87) and item-to-item correlations ranging from .35 to .65 (Lonsway & Fitzgerald, 1995).

Statistical Procedures

First, data were screened for pattern of missingness and the achievement of statistical assumptions. Following data screening, confirmatory factor analyses (CFA) were conducted for all adapted measures (i.e., CFNI, CMNI, ASI, AHBS, HTWS, ATVS) utilizing item-level data, and necessary modifications were made based on theory and investigation of modification indices. As outlined by Kline (2010), several model fit indices were explored to identify measurement structure and validation. Frequently utilized fit indices include the model chi-square, root mean square error of approximation (RMSEA),

comparative fit index (CFI), and the standardized root mean square residual (SRMR). The model chi-square is a good standard but is the toughest to achieve due to the strong influence of sample size (Kline, 2010). Given the influence of sample size, additional research (Tabachnick & Fidell, 2007) has suggested the importance of examining the ratio between the chi-square value and the degrees of freedom (χ^2/df). According to Tabachnick and Fidell (2007), ratios of two or below are indicative of positive fit. Furthermore, items with loadings less than the suggested cutoff of .32 were removed (Tabachnick & Fidell, 2007).

After the establishment of well-fitting factor structures for each of the adapted measures, internal consistency via Cronbach's alpha and split-half reliability via the Spearman-Brown coefficient were explored for all first- and second-order latent factors. First-order factors were removed from the final measure of rape culture if they demonstrated poor split-half reliability *and* internal consistency. The final second-order factors (i.e., traditional gender roles—masculine and feminine, sexism—hostile and benevolent, adversarial sexual beliefs, hostility toward women, and acceptance of violence) that demonstrated adequate split-half reliability and internal consistency were utilized for the remainder of analyses to increase parsimony and decrease model complexity. Following this determination items were summed and Pearson's bivariate correlations were run between second-order factors to investigate convergent validity. Finally, a hierarchical CFA was conducted utilizing the summed second-order factors to explore the proposed existence of an underlying latent factor we call rape culture.

Results

Demographic variables (i.e., age, race, sexual orientation, income, religious orientation, and year in school) were compared between participants who began all primary measures ($n = 314$) and those who were removed ($n = 58$) due to dropout; no significant differences were detected. Data were screened for pattern of missingness, univariate and multivariate normality, skewedness, and kurtosis. Within the current sample all assumptions were met. Due to the multivariate normality of the current data, maximum likelihood (ML) estimation was used for all analyses described below. Furthermore, via Mplus software (Muthén & Muthén, 2007), data was determined to be missing at random (MAR); therefore, full information maximum likelihood (FIML) was utilized to account for item-level missing data. When sum scores were utilized for correlations and the final model of rape culture available, case analysis was utilized to handle missing data (Parent, 2013). Furthermore, the

current sample met the minimum requirement of 200 participants for conducting CFA (Myers, Ahn, & Jin, 2011).

Measurement Confirmatory Factory Analyses

Traditional gender roles. A hierarchical CFA was conducted with the proposed first-order factor structures (i.e., winning, emotional control, risk-taking, violence, power over women, playboy, self-reliance, primacy of work, and heterosexual self-presentation) underlying the second-order factor of traditional masculine gender roles. The CFA resulted in adequate fit, $\chi^2/df = 1.62$, RMSEA = .04, CFI = .82, SRMR = .07; however, upon investigation into the model, one item—23: I don't like giving all my attention to work—did not meet the minimum loading of .32 suggested by Tabachnick and Fidell (2007). Therefore, this item was removed from the model and the CFA was re-run resulting in similar fit, $\chi^2/df = 1.62$, RMSEA = .04, CFI = .83, SRMR = .07, with all factors and items significantly loading within the proposed structure (see Table 1). Finally, all latent factors demonstrated significant predictability on the second-order factor of traditional masculine gender roles: winning, $r^2 = .58$, $p < .001$, emotional control, $r^2 = .70$, $p < .001$, risk-taking, $r^2 = .39$, $p = .008$, violence, $r^2 = .43$, $p < .001$, power over women, $r^2 = .54$, $p < .001$, playboy, $r^2 = .52$, $p < .001$, self-reliance, $r^2 = .62$, $p < .001$, primacy of work, $r^2 = .10$, $p = .062$, and heterosexual self-presentation, $r^2 = .52$, $p < .001$.

Next, a hierarchical CFA was conducted using the proposed first-order factor structure (i.e., thinness, domestic, invest in appearance, modesty, relational, involvement with children, sexual fidelity, romantic relationship, and sweet and nice) underlying the second-order factor of traditional feminine gender roles. The CFA resulted in adequate fit, $\chi^2/df = 1.85$, RMSEA = .05, CFI = .73, SRMR = .08; however, several items—24: I always downplay my achievements, 42: I would only have sex if I was in a committed relationship like marriage, and 44: I don't feel guilty if I lose contact with a friend—did not meet the minimum item loading of .32. In addition, the first-order factor of modesty negatively loaded on the second-order factor of traditional feminine gender norms. Thus, modesty and the aforementioned items were removed from the model and the CFA was re-run resulting in significantly improved fit, $\chi^2/df = 1.79$, RMSEA = .05, CFI = .77, SRMR = .08, with all factors and items significantly loading within the proposed structure (see Table 1). Finally, all latent factors demonstrated significant predictability on the second-order factor of traditional feminine gender roles: thinness, $r^2 = .22$, $p = .063$, domestic, $r^2 = .50$, $p < .001$, invest in appearance, $r^2 = .39$, $p = .002$, relational, $r^2 = .52$, $p < .001$, involvement

Table 1. Established Measurement Structures of Rape Culture.

Second-Order Factor	First-Order Factor	Items	r_s	α
Tradition masculine gender roles	Winning	1, 7, 15, 22, 27, 33	.92	.92
	Emotional control	13, 18, 25, 32, 40, 45	.75	.69
	Risk-taking	6, 8, 16, 28, 35	.80	.76
	Violence	4, 9, 19, 30, 34, 41	.70	.71
	Power over women	20, 29, 42, 44	.70	.72
	Playboy	2, 12, 21, 36	.82	.84
	Self-reliance	3, 10, 26, 38, 43	.80	.80
	Primacy of work	11, 31, 39	.79	.67
	Heterosexual self-presentation	5, 14, 17, 24, 37, 46	.79	.78
			.80	.74
Traditional feminine gender roles	Thinness	1, 17, 31, 37, 41	.81	.78
	Domestic	2, 5, 12, 26, 34	.74	.79
	Invest in appearance	3, 6, 14, 20, 27	.64	.70
	Relational[a]	7, 15, 21, 23	.74	.70
	Involvement with children	8, 16, 26, 40, 43	.52	.54
	Sexual fidelity	9, 18, 22, 32	.73	.68
	Romantic relationship	11, 25, 30, 33, 38	.72	.69
	Sweet and nice[a]	13, 28, 35, 39, 45	.67	.73
			.57	.62

(continued)

Table 1. (continued)

Second-Order Factor	First-Order Factor	Items	r_s	α
Hostile sexism		2, 4, 7, 10, 11, 14, 15, 16, 18, 21	.88	.88
Benevolent sexism			.85	.83
	Protective paternalism	3, 9, 17, 20	.70	.70
	Complementary gender differentiation	8, 19, 22	.66	.69
	Heterosexual intimacy	1, 6, 12, 13	.76	.75
Acceptance of violence			.65	.88
	Violence in war	4, 5, 6, 7, 8, 9, 10	.74	.71
	Penal code[a]	1, 2, 3	.46	.60
	Corporal punishment	11, 12, 13, 14, 15, 19	.83	.87
	Intimate partner violence	16, 17, 18, 20	.87	.87
Adversarial sexual beliefs		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15	.81	.85
Hostility toward women		1, 2, 4, 5, 7, 9, 10	.65	.78

Note. r_s = split-half reliability.
[a]Suggestive of removal due to questionable reliability and internal consistency.

with children, $r^2 = .44$, $p < .001$, sexual fidelity, $r^2 = .33$, $p = .001$, romantic relationship, $r^2 = .46$, $p < .001$, and sweet and nice, $r^2 = .64$, $p < .001$.

Sexism. A hierarchical CFA was conducted with the proposed first-order factor structures (i.e., protective paternalism, complementary gender differentiation, and heterosexual intimacy) underlying the second-order factor of benevolent sexism and correlated with hostile sexism. As a minimum of three factors is required to produce stability within a latent factor, benevolent sexism and hostile sexism were not placed under an overall factor of sexism; rather, a covariance was added between the two factors. The CFA resulted in good fit, $\chi^2/df = 1.85$, RMSEA = .05, CFI = .91, SRMR = .05, with all factors and items loading positively and significantly within the proposed structure (see Table 1). Finally, all latent factors demonstrated significant predictability on the second-order factor of benevolent sexism—protective paternalism, $r^2 = .97$, $p < .001$, complementary gender differentiation, $r^2 = .54$, $p < .001$, and heterosexual intimacy, $r^2 = .62$, $p < .001$—and a significant relationship was identified between hostile and benevolent sexism, $\beta = .59$, $p < .001$.

Adversarial sexual beliefs. A CFA was conducted with all AHBS items underlying a latent factor entitled adversarial sexual beliefs. The CFA resulted in less than adequate fit, $\chi^2/df = 2.97$, RMSEA = .08, CFI = .82, SRMR = .07; therefore, modification indices and theory were consulted. As a result, covariances were allowed between items 10: In all societies it is inevitable that one sex is dominant and 11: It is natural for one spouse to be in control of the other, $\beta = .29$, $p < .001$, 8: Men and women cannot really be friends and 15: It is possible for a man and a woman to just be friends (reverse scored), $\beta = .46$, $p < .001$. After allowing these covariances, the CFA demonstrated adequate fit, $\chi^2/df = 2.19$, RMSEA = .06, CFI = .89, SRMR = .06, with all items loading positively and significantly within the proposed structure (see Table 1).

Hostility toward women. A CFA was conducted with all HTWS items underlying a latent factor entitled hostility toward women. The CFA resulted in less than adequate fit, $\chi^2/df = 5.59$, RMSEA = .12, CFI = .79, SRMR = .07; therefore, modification indices and theory were consulted. Items 3: I usually find myself agreeing with (other) women (reverse scored), 6: When it really comes down to it, a lot of women are deceitful, and 8: I am sure I get a raw deal from (other women) were removed as they did not meet the minimum loading of .32. Furthermore, a covariance was added between items 7: I am easily angered by (other) women and 9: Sometimes (other) women bother me by just being around, $\beta = .45$, $p < .001$. Following these modifications, the CFA demonstrated adequate fit, $\chi^2/df = 2.79$, RMSEA = .08, CFI = .94, SRMR

= .05, with all items loading positively and significantly within the proposed structure (see Table 1).

Acceptance of general violence. The final hierarchical CFA was conducted using the proposed first-order factor structures (i.e., violence in war, penal code violence, corporal punishment of children, intimate partner violence) underlying the second-order factor of acceptance of general violence. The CFA resulted in less than adequate fit, $\chi^2/df = 2.50$, RMSEA = .07, CFI = .85, SRMR = .08, although upon investigation into the model results all items significantly and positively loaded within the proposed factor structure. Therefore, modification indices and theory were consulted. These indices suggested allowing covariances between items 19: An adult should whip a child for breaking the law and 15: Young children who refuse to obey should be whipped, as well as items 5: The manufacture of weapons is necessary and 4: Any nation should be ready with a strong military at all times. Therefore, these covariances were added and the CFA was re-run resulting in significantly improved fit, $\chi^2/df = 1.85$, RMSEA = .04, CFI = .83, SRMR = .07 (see Table 1). Finally, all latent factors demonstrated significant predictability on the second-order factor of acceptance of general violence—violence in war, $r^2 = .58$, $p < .001$, penal code violence, $r^2 = .42$, $p < .001$, corporal punishment of children, $r^2 = .57$, $p < .001$, intimate partner violence, $r^2 = .27$, $p < .001$—and significant covariances were identified between items 19 and 15, $\beta = .54$, $p < .001$, and 4 and 5, $\beta = .42$, $p < .001$.

Reliability and Validity

Moderate positive relationships were identified between several factors suggestive of convergent validity (see Table 2 for full listing). In particular, a moderate positive relationship was identified between traditional feminine and masculine gender roles, hostile and benevolent sexism, adversarial sexual beliefs and hostility toward women, and hostility toward women and acceptance of violence. Regarding reliability, the majority of factors demonstrated adequate split-half reliability and internal consistency. However, two factors within traditional feminine gender roles, relational and sweet and nice, demonstrated poor reliability and internal consistency suggestive of removal. In addition, the penal code factor within acceptance of general violence demonstrated poor reliability and questionable internal consistency and thus should be considered for removal; however, given the low number of items loading on this factor additional consideration may be warranted (see Table 1 for a full listing of split-half and Cronbach's alphas).

Table 2. Descriptive Statistics for the Final Measures of Rape Culture (n = 314).

	M	SD	1	2	3	4	5	6	7
Traditional masculine gender roles	104.99	10.85	—	.38***	.16**	.15**	.16**	.32***	.08
Traditional feminine gender roles	42.13	4.44		—	.08	.30***	.04	.09	−.11*
Hostile sexism	34.92	9.39			—	.48***	.53***	.57***	.38***
Benevolent sexism	39.89	9.13				—	.37***	.29***	.27***
Adversarial sexual beliefs	46.18	13.45					—	.58***	.45***
Hostility toward women	25.62	7.43						—	.31***
Acceptance of violence	41.30	9.51							—

Note. All values are based on the final, supported constructs (see Table 1); traditional masculine gender roles potential range is 45 to 180; traditional feminine gender roles potential range is 29 to 116; hostile sexism potential range is 10 to 60; benevolent sexism potential range is 11 to 66; adversarial sexual beliefs potential range is 15 to 105; hostility toward women potential range is 7 to 49; acceptance of violence potential range is 20 to 100.
*p < .05. **p < .01. ***p < .001.

Rape Culture CFA

A hierarchical CFA was conducted with the proposed first-order factor structure (i.e., traditional gender roles—masculine and feminine; sexism—hostile and benevolent; adversarial sexual beliefs; hostility toward women; acceptance of violence) underlying the second-order factor of rape culture (see Figure 1). The CFA resulted in less than adequate fit, χ^2/df = 5.78, RMSEA = .11, CFI = .90, SRMR = .06. Thus, modification indices were consulted to improve fit, while emphasizing the maintenance of theoretical grounding. Accordingly a covariance was allowed between feminine traditional gender roles and benevolent sexism. This modification resulted in significantly improved fit, χ^2/df = 3.05, RMSEA = .07, CFI = .96, SRMR = .04 with all factors, with the exception of traditional feminine gender roles, r = .19, p = .101, significantly loading on rape culture (see Figure 2). Finally, traditional feminine gender roles did not explain significant variance of rape culture, while traditional masculine gender roles, r^2 = .14, p = .060, only demonstrated a trend. The remaining factors explained significant variance of rape culture—hostile sexism, r^2 = .54, p < .001, benevolent sexism, r^2 = .26, p < .001, adversarial sexual beliefs, r^2 = .60, p < .001, hostility toward women, r^2 = .55, p < .001, and acceptance of violence, r^2 = .30, p < .001—and significant covariances were identified between traditional feminine and masculine gender roles, β = .46, p < .001, hostile and benevolent sexism, β = .21, p = .001, and
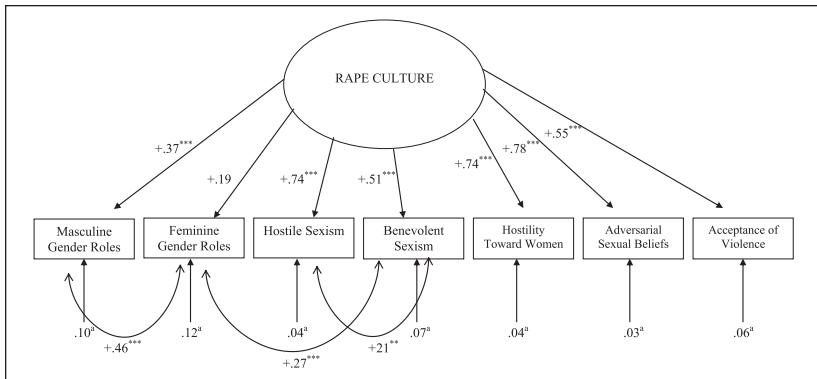
Figure 2. Final model of rape culture.
Note. χ^2/df = 3.05, root mean square error of approximation = .07, comparative fit index = .96, standardized root mean square residual = .04.
[a]Standard error.
**p < .01. ***p < .001.

traditional feminine gender roles and benevolent sexism, β = .27, p < .001. An analysis of measurement invariance was conducted by gender; no differences were identified between the constrained and unconstrained models indicative of similar model fit across genders (results available upon request).

Discussion

The present study added to the current literature by demonstrating initial empirical support for the proposed model of rape culture encompassing traditional gender roles (masculine and feminine), sexism (hostile and benevolent), hostility toward women, adversarial sexual beliefs, and acceptance of violence (see Figures 1 and 2), as well as initial support for utilizing a series of adapted well-established measures to assess said model. Furthermore, this study highlights the uniqueness between individual and cultural factors as several items did not translate from an individual (i.e., personal endorsement) to a cultural level (i.e., perceived peer support) and were subsequently removed from the proposed final measurements (see Table 1 for final items). Also contrary to individual measurement when assessed at a cultural level, the traditional feminine gender role modesty negatively loaded on the overall construct traditional feminine gender roles. This suggests that as opposed to personal perceptions of femininity, individuals perceive that their peers view women as conceited or boastful rather than modest or humble.

Additionally exploration into reliability and internal consistency for these adapted measures demonstrated concern regarding the following factors: relational and sweet and nice traditional feminine gender roles and penal code under acceptance of violence. As such, reliability and internal consistency may have been compromised during the transition from individual to peer explorations or through the removal of items resulting in decreased factor stability. These findings highlight the importance of exploring constructs within their proposed context. Thus, a cultural phenomenon such as rape culture should be explored at the cultural level as opposed to or at least in addition to individual endorsement.

The current research also added an increased depth to our understanding of rape culture as although the proposed model of rape culture (see Figures 1 and 2) demonstrated positive model fit, traditional feminine gender roles was not found to significantly contribute to the construct of rape culture. A potential explanation for this is that specific traditional feminine gender roles may contribute to rape culture while others may not. Future research would benefit from separating the subfactors of traditional feminine gender roles (i.e., thinness, domestic, invest in appearance, involvement with children, sexual fidelity, and romantic relationship) and explore their unique contributes to rape culture. Given the theme within rape culture of negative views toward women, it is possible that perceived positive feminine gender roles (e.g., involvement with children) may not contribute to rape culture and when included may muddle the overall influence of feminine gender roles. Consistent with this theme, hostile sexism, adversarial sexual beliefs, and hostility toward women explained the majority of variance within rape culture. Therefore, rape prevention programming may benefit from targeting cultural perceptions of women as inherently ill-willed, power-hungry, and subordinate to men. Furthermore, in the final model of rape culture (see Figure 2), a relationship was added between traditional feminine gender roles and benevolent sexism. Thus, traditional feminine gender roles may influence rape culture through their relationship to benevolent sexism as benevolent sexism is typically reserved for women who ascribe to traditional gender roles. Therefore, it may be more fruitful for rape prevention programming to target benevolent sexism and indirectly traditional gender roles than targeting traditional feminine gender roles separately.

Finally, the current research alludes to the benefit of prevention programming targeting peer perceptions of rape culture given initial support that this latent construct (i.e., rape culture) can be accessed by assessing perceived peer beliefs and adherence to the components underlying such a culture (i.e., traditional gender roles, sexism, adversarial sexual beliefs, hostility toward women, and acceptance of violence). Social norms intervention may be one

avenue to target and adjust such perceptions. According to social norms theory, individuals' behavior is often influenced by misperceptions of normative peer behavior (Berkowitz, 2003). As such, several prevention programs for risky alcohol use and sex risk have utilized a social norm approach to prevention. Through this approach, individuals are provided with accurate norms of a salient referent group (Berkowitz, 2003). To establish accurate norms, university students are polled regarding their engagement in various behaviors (e.g., bystander behavior, sexual activity, and alcohol consumption). Following norm establishment, university students are provided with these results to decrease inaccuracy, which may influence individual-level behavior (e.g., if I believe the majority of my peers are drinking to excess, I am more likely to drink to excess). This approach has been recently applied to rape prevention programming demonstrating considerable promise (Gidycz et al., 2011).

Although the current research added to literature exploring rape culture in several ways, it is important to highlight several limitations. The first and potentially greatest limitation of the current research is the dated nature of the proposed model of rape culture. As previously stated, Burt initially proposed the aforementioned model of rape culture in 1980 and subsequent theoretical work has not been investigated since the 1990s (Lonsway & Fitzgerald, 1994, 1995). Therefore, additional exploration into possible influential variables is warranted. Future research should explore the potential contributing effects of substance use, personality, hook-up culture/sex positivity on college campuses, as well as the influence of the media and legal systems in creating and reinforcing rape culture.

In addition, given the complex nature of the current study, several participants dropped out of the study prior to completion and were thus excluded from subsequent analyses. Although no demographic differences were identified between those who completed the study and those who did not, future efforts should focus on decreasing participant fatigue. Furthermore, although efforts were made to increase generalizability, the current sample was predominately made up of Non-Hispanic White, middle-class, heterosexual, female students. Therefore, future research should explore the validity of these adapted measures and the proposed model of rape culture with more diverse, representative samples. Finally, although a definition of peers was provided, the range of individuals participants were thinking of when discussing their peers is unclear; future research would benefit from asking participants to describe who they were thinking of when endorsing peer perceptions of rape culture.

In closing, the current study provides increased understanding of rape culture and highlights the need for additional research to establish a consistent

quantification of this construct. As previously mentioned, this is crucial given that limited conclusions may be drawn about the existence and in turn eradication of rape culture without an agreed upon definition and source of measurement. Given recent prevention efforts espousing to address and dismantle such a culture, the current research may help to empirically investigate the ways in which current programming is or is not bringing those claims to fruition and in turn what modifications may increase efficacy and effectiveness of rape prevention.

Declaration of Conflicting Interests

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